

California Regional Water Quality Control Board  
North Coast Region

ORDER NO. R1-2011-0015

REQUIRING THE FORESTVILLE WATER DISTRICT  
WASTEWATER TREATMENT FACILITY  
TO CEASE AND DESIST FROM DISCHARGING OR THREATENING  
TO DISCHARGE EFFLUENT IN VIOLATION OF  
WASTE DISCHARGE REQUIREMENTS

ORDER NOS. R1-2004-0027 AND R1-2011-0016  
WDID No. 1B83100OSON

Sonoma County

The Regional Water Quality Control Board, North Coast Region (hereinafter Regional Water Board), finds that:

1. The Forestville Water District (hereinafter Discharger) owns and operates a municipal wastewater treatment facility (WWTF) located in Forestville, California adjacent to Jones Creek, a tributary to Green Valley Creek and thence the Russian River. The WWTF provides advanced wastewater treatment and consists of a collection system, screening, a 2.67 million gallon (MG) aerated pond, a 0.7 MG settling pond, a prefilter pump station, two microfiltration modules and microfiltration control facilities, and chlorination/dechlorination. Design treatment capacities are 0.13 million gallons per day (mgd) (average dry weather flow) and 0.58 mgd (maximum daily flow).
2. The WWTF has been regulated by Waste Discharge Requirements (WDRs), Regional Water Board Order No. R1-2004-0027, National Pollutant Discharge Elimination System (NPDES) Permit No. CA0023043, WDID No. 1B83100OSON, adopted by the Regional Water Board on October 6, 2004. The permit expired on October 6, 2009 and was administratively extended because the Discharger submitted a Report of Waste Discharge for its permit renewal in a timely manner. Order No. R1-2004-0027 contained interim and final effluent limitations for copper, lead, zinc, and dichlorobromomethane (DCBM) and a compliance schedule requiring the Discharger to comply with final effluent limitations for all of these constituents by October 1, 2009. Order No. R1-2004-0027 also contained final effluent limitations for DCBM plus chloroform that were carried over from WDRs Order No. 95-54 and required effluent monitoring for cyanide and nitrate to obtain sufficient data to determine whether these pollutants may be discharged at a level that will cause have the reasonable potential to cause or contribute to an excursion above any state water quality standard.
3. Regional Water Board Order No. R1-2011-0016, WDRs and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0023043, WDID No. 1B83100OSON is scheduled to be adopted by the Regional Water Board, either

concurrently with this Cease and Desist Order or shortly thereafter. Upon adoption, Order No. R1-2011-0016 will supersede Order No. R1-2004-0027. Order No. R1-2011-0016 includes discharge prohibitions, effluent and receiving water limitations, and compliance provisions, including final effluent limitations for copper, cyanide, DCBM, chloroform plus DCBM, and nitrate.

4. Section 13301 of the California Water Code states “When a regional board finds that a discharge of waste is taking place, or threatening to take place, in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventative action.”
5. The Orders identified in Findings 2 and 3 above implement provisions of the California Toxics Rule (CTR) and the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP) by requiring the Discharger to monitor its effluent for CTR constituents that may have reasonable potential to cause or contribute to an excursion above a water quality criterion or objective applicable to the receiving water. The SIP also requires compliance with all final effluent limitations for CTR constituents by May 18, 2010.
6. The Orders identified in Findings 2 and 3 above also implement provisions of the Water Quality Control Plan for the North Coast Region (Basin Plan) by requiring the Discharger to monitor its effluent for certain non-CTR constituents that may have reasonable potential to cause or contribute to an excursion above a water quality criterion or objective applicable to the receiving water. Order No. R1-2004-0027 specifically required monitoring for nitrate, while Order No. R1-2011-0016 requires monitoring for nitrate and Title 22 pollutants and establishes effluent limitations for nitrate.
7. Sufficient copper, lead, zinc, DCBM, and chloroform plus DCBM data was available at the time Order No. R1-2004-0027 was prepared and adopted to warrant the inclusion of interim and final effluent limitations for these CTR constituents and a time schedule to achieve compliance by May 18, 2010. During the term of Order No. R1-2004-0027, the Discharger collected sufficient effluent data to demonstrate that the discharge has no reasonable potential for lead and zinc, therefore effluent limitations for these two constituents are not included in Order No. R1-2011-0016. Data collected during the term of Order No. R1-2004-0027 demonstrated that there is reasonable potential for copper, cyanide, DCBM, chloroform plus DCBM, and nitrate. Final effluent limitations for copper, DCBM, and chloroform plus DCBM have been retained in Order No. R1-2011-0016 with minor modifications based on a new reasonable potential evaluation utilizing data collected during the term of Order No. R1-2004-0027. Effluent limitations are

newly established for cyanide and nitrate based on the results of a reasonable potential analysis conducted with data collected during the term of Order No. R1-2004-0027. The final effluent limitation for chloroform plus DCBM combined has been changed to an effluent limitation for Total Trihalomethanes (combination of dichlorobromomethane, chloroform, dibromochloromethane, and bromoform) and reduced from 100 ug/L to 80 ug/L due to a revision in the Title 22 maximum contaminant level.

8. The Discharger is violating or threatening to violate the following terms in Order No. R1-2004-0027:

**B. EFFLUENT LIMITATIONS**

11. Effluent Limitations for Protection of Freshwater Aquatic Life

During periods of discharge to Jones Creek, representative samples of advanced treated wastewater collected at Discharge Serial No. 002 shall not contain constituents in excess of the following limits:

| Constituent         | Unit | Interim Limitations <sup>a</sup> |               | Final Limitations <sup>b</sup> |              |
|---------------------|------|----------------------------------|---------------|--------------------------------|--------------|
|                     |      | 1-Hour Average                   | 4-Day Average | AMEL                           | MDEL         |
| Copper <sup>c</sup> | ug/l | Attachment E                     | Attachment E  | Attachment B                   | Attachment B |

Notes:

AMEL – Average Monthly Effluent Limitation

MDEL – Maximum Daily Effluent Limitation

a These interim limitations shall be effective until October 6, 2009.

b Final effluent limitations shall replace the interim limitations on October 6, 2009.

c Interim and final effluent limitations for **copper**, lead, and zinc are for total recoverable metal fraction and are determined using formulas that are based on the hardness of the receiving water at the time the discharge is sampled. Attachment E of this Order provides calculated interim acute and chronic aquatic life values for copper and lead for a range of hardness values using the formulas noted in Attachment E.

**Attachments B, C, and D** provide calculated final effluent limitations for **copper**, lead, and zinc, respectively, for a range of hardness values using the formulas noted therein.

*Added note: Although Note c above refers to zinc and lead, these constituents are not the subject of this CDO. The table of hardness-dependent interim copper effluent limitations from Attachment E of Order No. R1-2004-0027 is included as Attachment 1 to this Order and are the interim effluent limitations pursuant to this Order.*

**J. GENERAL PROVISIONS**

30. Interim Requirements and Compliance Schedule for Priority Pollutants.

Comply with final CTR effluent limitations for **copper**, lead, zinc, and

dichlorobromomethane by October 1, 2009.

9. The Discharger is violating or threatening to violate the following terms in Order No. R1-2011-0016:

**IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

**A. EFFLUENT LIMITATIONS**

**3. Final Effluent Limitations – Discharge Point 002 (Discharge to Jones Creek)**

- b. The Discharger shall maintain compliance with the following final effluent limitations at Discharge Point 002, with compliance measured at Monitoring Location EFF-002, as described in the attached MRP.

**Table 7. Final Effluent Limitations for Discharge Point 002 (Discharge to Jones Creek)**

| Parameter            | Units | Effluent Limitations |                |                |
|----------------------|-------|----------------------|----------------|----------------|
|                      |       | Average Monthly      | Average Weekly | Maximum Daily  |
| Dichlorobromomethane | µg/L  | 0.56                 | ---            | 1.45           |
| Copper               | µg/L  | <sup>[9]</sup>       | ---            | <sup>[9]</sup> |

<sup>[9]</sup> Final effluent limitations for copper are hardness-dependent. See Appendix E-1 to Attachment E for the full table of hardness-dependent final copper effluent limitations, which are determined based on the hardness of the effluent at the time the discharge is sampled.

10. Monitoring data collected between October 2004 and April 2010 (during the term of Order No. R1-2004-0027) revealed that the discharge contains levels of copper, cyanide, DCBM, chloroform plus DCBM, and nitrate that may be discharged at concentrations that will cause, have the reasonable potential to cause, or contribute to an excursion above water quality objectives for these five constituents.

The data consisted of 35 samples that were analyzed for copper and cyanide, 31 samples that were analyzed for DCBM, 30 samples that were analyzed for nitrate, and 28 samples that were analyzed for chloroform. All of these samples were collected during the allowable discharge season, primarily the months of November through April during the period of October 2004 through April 2010, although the Discharger was not always discharging at the time that samples were collected. Samples collected in October and November 2004 were also included since the Discharger was discharging during these two months. The analytical results revealed the following:

- Copper is present in the Discharger's effluent at concentrations ranging from <0.7 ug/L to 54 ug/L with twelve samples that exceeded the most stringent final effluent limitation that applied based on the hardness at the time the copper sample was collected. Eight of the exceedances occurred prior to final effluent limitations being in effect and four of the exceedances occurred after the final effluent limitations became effective on October 1, 2009. The Discharger submitted an infeasibility analysis and request for a time extension to comply with copper effluent limitations as described in Finding 14.
- Cyanide is present in the Discharger's effluent at concentrations ranging from <2 ug/L to 10 ug/L, with eight samples that exceeded the most stringent water quality objective of 5.2 ug/L. All of the exceedances occurred during allowable discharge months when there was no discharge to surface waters. The Discharger has not requested a time extension to comply with the newly established effluent limitations for cyanide because the Discharger believes that the chances of exceeding the final cyanide effluent limitations are low.
- DCBM is present in the Discharger's effluent at concentrations ranging from <0.08 ug/L to 13 ug/L with seven samples that exceeded the most stringent effluent limitation of 0.56 ug/L. Five of the seven samples also exceeded the maximum daily effluent limitation of 1.45 ug/L. All of the exceedances occurred during allowable discharge months when there was no discharge to surface waters. The Discharger has not requested a time extension to comply with the final effluent limitations for DCBM because the Discharger believes that the chances of exceeding the final DCBM effluent limitations are low.
- Nitrate is present in the Discharger's effluent at concentrations ranging from 0.52 mg/L to 18 mg/L with four samples that exceeded the most stringent water quality objective of 10 mg/L. All of the exceedances of the water quality objective occurred during allowable discharge months when there was no discharge to surface waters. The Discharger has not requested a time extension to comply with the final effluent limitation of 10 mg/L for nitrate because the Discharger believes that the chances of exceeding the final nitrate effluent limitation are low.
- Chloroform plus DCBM are present in the Discharger's effluent at concentrations ranging from 2.3 ug/L to 173 ug/L with one sample that exceeded the effluent limitation of 100 ug/L in the previous Order as well as the effluent limitation of 80 ug/L that is established in Order No. R1-2011-0016. The Discharger has not requested a time extension to comply with the final effluent limitation of 80 ug/L for chloroform plus DCBM because the only exceedance occurred in November 2004 and the Discharger appears to have modified its chlorination process in a manner that reduces the

concentration of chloroform to levels that are consistently below the effluent limitation.

11. During the term of Order No. R1-2004-0027 the Discharger submitted two reports that address its compliance efforts with regard to copper and DCBM. The reports include the May 30, 2008 report titled *Implementation Plan to Achieve Compliance with Final Effluent Limitations for Copper, Lead, Zinc, and Dichlorobromomethane* and the August 26, 2010 report titled *Copper Infeasibility Study, Forestville Water District*. According to these reports, the Discharger completed monitoring and several other tasks for the purpose of achieving compliance with CTR water quality objectives. With regard to copper, the Discharger reviewed the status of source water control efforts by the Sonoma County Water Agency, Forestville's water supplier, reviewed drinking water tap sampling results, and surveyed other local municipalities regarding their strategies and possible success in reducing effluent copper. With regard to DCBM, the Discharger reviewed its chlorine usage practices and modified several operational practices to favorably reduce chlorine usage.
12. The August 26, 2010 Copper Infeasibility Study report states that the Discharger is unable to comply with final effluent limitations for copper, contains an analysis of the Discharger's inability to comply with final effluent limitations for copper and identifies proposed actions and compliance schedules to comply with final copper effluent limitations. The Regional Water Board concurs with the Discharger's assessment that it is infeasible to comply with final effluent limitations for copper based on the fact that approximately 75 percent of the copper monitoring results exceeded the final average monthly effluent limitation (AMEL) and approximately 25 percent of the copper results exceeded the maximum daily effluent limitation (MDEL). The Copper Infeasibility Study report includes a request for the Regional Water Board to adopt a Cease and Desist Order.
13. Pursuant to Water Code section 13385(j)(3), mandatory minimum penalties (MMPs) will not apply to future violations of the final effluent limitations for copper if:
  - a. A cease and desist order is issued on or after July 1, 2000, and specifies the actions that the discharger is required to take in order to correct the violations that would otherwise be subject to MMPs;
  - b. The regional board finds that the discharger is not able to consistently comply with one or more of the effluent limitations established in the waste discharge requirements applicable to the waste discharge because the effluent limitation is a new or more stringent regulatory requirement that has become applicable to the waste discharge after the effective date of the waste discharge requirements and after July 1, 2000, new or modified control measures are necessary in order to comply with the effluent limitation, and the new or

modified control measures cannot be designed, installed, and put into operation within 30 calendar days;

- c. The regional board establishes a time schedule for bringing the waste discharge into compliance with the effluent limitations that is as short as possible, taking into account the technological, operational, and economic factors that affect the design, development, and implementation of the control measures that are necessary to comply with the effluent limitations, and where the time schedule exceeds one year, the time schedule includes interim requirements and actions and milestones leading to compliance, and
  - d. The discharger has prepared and is implementing in a timely and proper manner, or is required by the regional board to prepare and implement, a pollution prevention plan pursuant to Water Code section 13263.3.
14. Because this Order establishes a CDO for anticipated future violations of final copper effluent limitations, after making specific findings and setting interim requirements and specific actions and milestones to lead to compliance with final effluent limitations, in accordance with the Water Code section 13385(j)(3) and the terms of this Order, no MMPs will be assessed for violations of the final copper effluent limitations. Specifically, the Regional Water Board finds that:
- a. The CDO is being issued after July 1, 2000, and specifies the actions the Discharger is required to take to correct the violations of Order No. R1-2004-0027 (Effluent Limitation B.11) and Order No. R1-2011-0016 (Effluent Limitation IV.A.3.b), as set out in Findings 8 and 9 respectively, above.
  - b. The Discharger is unable to consistently comply with final copper effluent limitations that are in effect because new or modified control measures will be needed for the Discharger to comply, and the new or modified control measures are dependent on the completion of a series of studies, thus the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days;
  - c. Requirement 1 of this Order establishes a time schedule for bringing the WWTF into compliance with the final copper effluent limitations that is as short as possible. A maximum of 60 months are provided to the Discharger to complete a series of studies, and based upon the findings from those studies, to design, install and implement control measures that will lead to compliance with final effluent limitations for copper.
  - d. The Discharger's Copper Infeasibility Study identified pollution prevention activities designed to minimize the potential for permit violations. These activities include efforts to reduce influent copper by controlling industrial/commercial discharges, evaluating opportunities to modify the treatment process to reduce the amount of copper carrying through to the

effluent, and evaluating sampling procedures to ensure that they are producing representative copper results.

15. Accordingly, the Regional Water Board finds that MMPs for violations of effluent limitations for copper when discharging to Jones Creek do not apply, so long as the Discharger complies with the interim effluent limitations and compliance schedules included in this Order.
16. The compliance schedule established for copper in this Order is intended to be as short as possible. The compliance schedule for copper accounts for the considerable uncertainty in determining effective measures (e.g., evaluate industrial/commercial sources of copper and identify possible actions, source water quality verification, applicability of a site specific water effect ratio) necessary to achieve compliance with final effluent limitations for copper. This Order allows time for the Discharger to first evaluate industrial/commercial sources of copper and identify possible actions and verify source water quality before requiring further actions which are likely to be more costly and take more time to explore and implement. The copper compliance schedule is based on reasonably expected times needed to evaluate potential compliance measures in a step-wise manner. The Regional Water Board may wish to revisit these assumptions as more information becomes available from the Discharger's evaluations.
17. This Order requires the Discharger to comply with interim effluent limitations for copper. The SIP requires that interim limitations be based on past performance of limits in previous orders, whichever is more stringent. In this case, interim limitations are based on limits established in Attachment B of Order No. R1-2004-0027. These interim limitations are intended to ensure that the Discharger maintains at least its existing performance while completing all tasks required by the compliance schedules.
18. Pursuant to Water Code section 13389 and section 15321 of title 14 of the California Code of Regulations, this is an enforcement action for violations and threatened violations of waste discharge requirements, and as such is exempt from the requirements of the California Environmental Quality Act (Public Resources Code sections 21000-21177).
19. On June 23, 2011, after due notice to the Discharger and all other interested persons, the Regional Water Board conducted a public hearing and received evidence regarding this Order.
20. Any person affected by this action of the Regional Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with Water Code Section 13320 and Title 23, California Code of Regulations, Section 2050. The petition must be received by the State Water Board within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request. In addition to filing a

petition with the State Water Board, any person affected by this Order may request the Regional Water Board to reconsider this Order. To be timely, such request must be made within 30 days of the date of this Order. Note that even if reconsideration by the Regional Water Board is sought, filing a petition with the State Water Board within the 30-day period is necessary to preserve the petitioner's legal rights. If you choose to request reconsideration of this Order or file a petition with the State Water Board, be advised that you must comply with the Order while your request for reconsideration and/or petition is being considered.

THEREFORE, IT IS HEREBY ORDERED, that pursuant to Water Code sections 13300 and 13301, the Discharger shall cease discharging waste contrary to the prohibitions and effluent limitations contained in Findings 8 and 9, above, and comply with the following requirements:

1. The Discharger shall cease and desist from discharging and threatening to discharge waste in violation of the terms of Order No. R1-2004-0027 and Order No. R1-2011-0016 described in Findings 8 and 9 above and achieve compliance with copper effluent limitations at the earliest possible date in accordance with the following compliance schedule:

**Compliance Schedule for Final Effluent Limitations for Copper.**

| <b>Task</b> | <b>Task Description</b>   | <b>Compliance Date</b> |
|-------------|---|------------------------|
| 1a          | Evaluate industrial/commercial sources of copper and submit report  | January 15, 2012       |
| 1b          | Identify possible actions (e.g., programs, ordinances) to be implemented if industrial or commercial sources of copper are present in the Forestville Water District and submit report.   | January 15, 2013       |
| 2           | Evaluate copper concentrations through the wastewater treatment plant over annual cycle to identify any trends and submit final report with findings and recommendations. This effort was started in October 2010.                          | January 15, 2014       |
| 3           | Conduct a source water quality verification beginning September 1, 2011. If results of initial testing indicate that this is a viable method to address copper, continue testing and submit final report with findings and recommendations. | January 15, 2015       |
| 4           | Conduct a discharger-specific WER study, if necessary, based on the results of Tasks 1 through 3 and submit study results.  | January 15, 2016       |
| 5           | Discharger must comply with final effluent limitations for copper no later than June 30, 2016.  | June 30, 2016          |

- The Discharger shall comply with the following interim effluent limitations for copper in the interim period established by this Order for the Discharger to reach compliance with final effluent limitations set forth in Order Nos. R1-2004-0027 and R1-2011-0016:

**Interim Effluent Limitations for Discharge Point 002, Discharge to Jones Creek**

| <b>Parameter</b> | <b>Units</b> | <b>Average Monthly Effluent Limitation</b> | <b>Maximum Daily Effluent Limitation</b> |
|------------------|--------------|--|--|
| Copper           | µg/L         | Attachment 1                               | Attachment 1                             |

- In the interim period for the Discharger to achieve full compliance with Order Nos. R1-2004-0027 and R1-2011-0016, the Discharger shall operate and maintain, as efficiently as possible, all facilities and systems necessary to comply with all prohibitions, effluent limitations and requirements identified in Order Nos. R1-2004-0027 and R1-2011-0016 or any future waste discharge requirements issued for the WWTF.
- If, for any reason, the Discharger is unable to perform any activity or submit any documentation in compliance with the deadlines set forth in Requirement 1 above, the Discharger may request, in writing, that the Regional Water Board grant an extension of the time. The extension request shall include justification for the delay. An extension may be granted by the Regional Water Board Executive Officer for good cause, in which case this Order will be accordingly revised in writing.
- If the Executive Officer of the Regional Water Board finds that the Discharger fails to comply with the provisions of this Order, the Executive Officer may take all actions authorized by law, including referring the matter to the Attorney General for judicial enforcement or issuing a complaint for administrative civil liability pursuant to Water Code sections 13350 and 13385. The Regional Water Board reserves the right to take any enforcement actions authorized by law.

**CERTIFICATION**

I, Catherine Kuhlman, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on June 23, 2011.

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Catherine Kuhlman  
Executive Officer